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<div>Division of Forensic Science</div> <div>CONTROLLED SUBSTANCES PROCEDURES MANUAL</div>	Amendment Designator:
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<div>26 ANABOLIC STEROID METHODOLOGY</div> <div> <p><b>26.1 Brief Pharmacology:</b> Promotes muscle growth (anabolic effect)</p> <p><b>26.2 Drug Group Examples:</b> Testosterone (associated esters), stanozolol, boldenone</p> <p><b>26.3 Scheduling:</b> Anabolic steroids are listed in Schedule III.</p> <p><b>26.4 Extraction:</b></p> <p>26.4.1 May be dry extracted into methanol or other organic solvents.</p> <p>26.4.2 Injectables are often found in oils which may be extracted with methanol for further analysis.</p> <p><b>26.5 Color Test Results:</b> There are no good screening tests for steroids.</p> <p><b>26.6 Pharmaceutical Identifiers:</b></p> <p>26.6.1 Many substituted or negative preparations are encountered which make pharmaceutical identifiers less useful than with other types of preparations. They should not be ignored, but may need to be discounted.</p> <p><b>26.7 TLC:</b></p> <p>26.7.1 Baths: TLC6 separates many anabolic steroids. TLC1, TLC2, TLC3, TLC4 and TLC5 are also recommended.</p> <p>26.7.2 Detection methods:</p> <ul style="list-style-type: none"> <li>• UV</li> <li>• Sulfuric Acid/Ethanol Reagent for steroids</li> <li>• Iodoplatinate will visualize Stanozolol</li> <li>• KMnO<sub>4</sub> will visualize steroids with unsaturated bonds</li> </ul> <p><b>26.8 GC:</b></p> <p>26.8.1 Some of these materials will require elevated temperatures and have long retention times. Special derivatizing techniques may assist chromatographic performance.</p> <p><b>26.9 FTIR:</b> May need additional extraction to eliminate oils.</p> <p><b>26.10 GC/MS:</b></p> <p>26.10.1 Molecular weights may exceed 500 and the usual mass spectral mass range would then need to be extended.</p> <p><b>26.11 References:</b></p> <p>26.11.1 Chiong <i>et al.</i> "The Analysis and Identification of Steroids", <i>Journal of Forensic Sciences</i>, March 1992.</p> <p>26.11.2 Walters <i>et al.</i> "Analysis of Illegally Distributed Anabolic Steroid Products", <i>JAOAC</i>, Vol. 73, No. 6, 1990.</p> <p style="text-align: right;">♦ End</p> </div>	